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EXAMINER

PAK, HANNAH J

ART UNIT	PAPER NUMBER
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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Attachment to Box 11:

The applicants' arguments filed 08/24/2010 are fully considered but are not found persuasive for the following reasons:

(1)

Applicants' Argument: The applicants contend that only a small fraction of the modifying agents disclosed by Fukushima are the claimed α -silanes, which are never used or call out any by their chemical names in Fukushima (see Page 3 of the Applicants' Remarks). According to the applicants, none of the specifically listed silanes at Col. 5, lines 7-20 of Fukushima are the claimed α -silanes (see Page 3 of the Applicants' Remarks).

Examiner's Response: However, this contention is not well taken. As mentioned in the previous action, Fukushima is not limited to the specifically mentioned silanes. Fukushima discloses employing modified silica having organosilane compounds, encompassed by the claimed structural formula, for the purpose of forming a coating composition having excellent abrasion (scratch)-resistant properties (Col. 3, lines 10-32). Thus, the selection of the organosilane compound within the claimed structural formula used in the coating composition taught by Fukushima for the purpose of providing desired abrasion (scratch)-resistant properties is well within the skill of one ordinary in the art. As indicated in MPEP § 2144.08, the disclosure in a prior art reference of compositions having a multitude of effective ingredient combinations does not render any particular formulation less obvious, particularly when the claimed composition is used for the identical purpose taught by the prior art reference.

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(2)

Applicants' Argument: The applicants argue that Fukushima indicates that its secret to higher hardness coatings lies in the resin system (polymethacryloyloxy alkyl isocyanurate), not the modified silica (See Pages 2-3 and 5 of the Applicants' Remarks).

Examiner's Response: This argument is incorrect as is apparent from Col. 4, lines 47-55 of Fukushima, which indicates the novelty of its invention, a modified silica. Specifically, Fukushima discloses that its present invention, i.e., a abrasion resistant coating, overcame past difficulties by using a colloidal silica, which was chemically modified with an organosilane compound defined by formula (I) (Col. 4, lines 47-49). Fukushima further discloses that the greater the extent of the reaction between the silica and the organosilane compound becomes, the greater the compatibility between curable silicone and the monomer mixture containing polymethacryloyloxy alkyl isocyanurate is obtained, leading to a cured coating with improved abrasion resistance, weather resistance, and durability (Col. 4, lines 50-55). Moreover, Fukushima discloses that the monomer mixture containing polymethacryloyloxyalkyl isocyanurate mainly serves to improve the dispersion stability of the silicone component in the coating (Col. 8, lines 30-35). However, regardless of the correctness of the applicants' argument, the fact remains that Fukushima teaches or would have suggested the claimed modified silica as indicated above.

(3)

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Applicants' Argument: **(1)** The applicants allege that there is a long felt need for a harder, more scratch-resistant coating, as evidenced by US 2009/0297839 issued to Jin et al. and US 7,524,562 issued to Tamaki et al. (see Pages 2-4 of the Applicants' Remarks). According to applicants, US 2009/0297839 issued to Jin et al. and US 7,524,562 issued to Tamaki et al. show that their claimed invention satisfies such long felt need. In support of this contention, the applicants rely on examples and comparative examples in the declaration under Rule 132 executed by Mr. Christoph Briehn on 03/01/2010 (see Pages 2-4 of the Applicants' Remarks). **(2)** While the applicants acknowledge that the modified silicas used by Fukushima contain the same polymerizable species, i.e., a methacryloxy group, they argue that their modified silica unexpectedly and surprisingly produces a much higher level of hardness than those taught by Fukushima as evidenced by the same examples and comparative examples in the declaration mentioned above (see Pages 4-5 of the Applicants' Remarks). The applicants further argue that the examples and comparative examples from the same declaration showing are commensurate with the scope of the claims (see Pages 5-6 of the Applicants' Remarks).

Examiner's Response: **(1)** The applicants' reliance on US 2009/0297839 issued to Jin et al. and US 7,524,562 issued to Tamaki et al. to show that the long felt need for a harder, more scratch-resistant coating is misplaced. According to those references, they already solve such long felt need via their own inventions. Fukushima, like those references, also satisfies such long felt need through its curable coating composition containing a binder and the modified silica, Inclusive

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of the claimed modified silica. Moreover, the applicants' comparative data do not indicate that the applicants' invention solves the long felt need that US 2009/0297839 issued to Jin et al. and US 7,524,562 issued to Tamaki et al., and/or Fukushima were unable to address. It follows that the applicants have not shown that there was a long felt need for the claimed invention, much less the claimed invention satisfied the long felt need. **(2)** However, the applicants still have not shown why the limited showing in the examples from the declaration and pages 13-15 of the present specification is commensurate in scope with the degree of protection sought by the very broad claims of the instant application. For instance, while the examples are directed to a showing of only one type of organosilane, e.g., methacrylatomethyltrimethoxysilane, together with a specific metal oxide particle (e.g., SiO₂ organosol) in a particular amount, the claims are not so limited. The claim broadly cited formula for the organosilane compound includes numerous organosilane compounds in combination with any and all metal oxide particles in any amount. See *MPEP* § 716.02. Accordingly, the applicants fail to rebut the prima facie case of obviousness established in the record.

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